COMMENTS: The levels of radioactivity and heavy metal contamination at the former Tenoroc phosphate mine in Polk County would qualify the site as a "national priority" under the U.S. Environmental Protection Agency's Superfund program. But the EPA won't publish a final recommendation on Tenoroc because the agency has recently recognized that similar environmental contamination can be expected at another 20 old phosphate mine or chemical plant sites.

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EPA won't sign off on mine study
Problem could be too big for Superfund

By GREG MARTIN
Staff Writer

The levels of radioactivity and heavy metal contamination at the former Tenoroc phosphate mine in Polk County would qualify the site as a "national priority" under the U.S. Environmental Protection Agency's Superfund program.

But the EPA won't publish a final recommendation on Tenoroc because the agency has recently recognized that similar environmental contamination can be expected at another 20 old phosphate mine or chemical plant sites.

The phosphate sites on the EPA's list of potential Superfund projects include the bankrupt Mulberry Phosphates company's fertilizer plants in Mulberry and Palmetto. The state of Florida will spend at least $160 million to clean up one the plants, Piney Point.

Each mine on the list would be many times bigger than the typical cleanup projects funded by the Superfund program, according to Brad Jackson, EPA project manager.

Typically, the Superfund pays for cleanups of smaller sites of up to 100 acres. Each mine site amounts to 6,000 acres or more. Administrators are debating whether it is appropriate for the Superfund to pay for what have been dubbed "megasites," Jackson said.

Jackson, based in the EPA's Atlanta regional office, said he has rewritten a draft EPA report published in January 2001 by EPA consultant Tetra Tech EM. That report called for a cleanup of the Tenoroc site.

But Jackson said his final report won't be published until EPA administrators establish a policy for how similar pollution, if found at the 20 other Florida phosphate sites, will be cleaned up.

"This is a large group of sites to deal with that could have a lot of impact on the state and federal levels," said Jackson, in a phone interview Tuesday. "We're wanting to make sure that what we do is consistent nationally.

"It could set a trend or expectation if, for whatever reasons, we say this (Tenoroc mine) should be put on the National Priority List. This is one of 21 sites."

Located a mile-and-a-half southwest of Lakeland, the 6,000-acre Tenoroc mine was excavated by Borden Chemical Co. in the 1970s. The company donated the reclaimed site to the state in 1982 to create the Tenoroc Fish Management Area. The site includes 1,000 acres of water-filled pits and 5,000 acres of areas reclaimed for picnicking, hiking, horseback riding, fishing and hunting.

The mine originally included an ore beneficiation plant that separated phosphate rock from waste sand and clay. In the separation process, Borden used chemical compounds including alkali, tall oil, No. 5 diesel oil, kerosene, amine and sulfuric acid.

As a result of the excavation, metals and radioactive materials found naturally throughout the soil matrix get concentrated at the surface.

The Tetra Tech study found elevated levels of arsenic, barium, beryllium, cadmium, chromium, lead and other metals at several clay settling areas and sand-filled areas where samples were taken.

Also, the clay settling areas contained elevated levels of 15 radioactive chemicals. They included Radium-226, which was found as high as 41.9 picocuries per gram -- far exceeding the EPA's Superfund Chemical Data Matrix Cancer Risk Screening Concentration of 2.7 picocuries per gram.

Samples of soil also yielded as much as 20.7 picocuries per gram of Radium-226.

That screening level merely consists of a threshold that triggers further EPA study, Jackson said.

A 20-acre picnic area, located where the beneficiation plant once processed the ore, was found to contain the highest radiation.

While the radiation levels were up to 20 times higher than normal background levels, health risks are not deemed to be an immediate concern. The contamination could be expected to harm people only if they lived on the site for 30 years or more, Jackson has said.

The study also cited a concern that contamination could reach drinking water wells within 4 miles. Also, elevated levels of arsenic, cadmium, lead, manganese and several radiochemical compounds were detected in sediment of a canal that drains into Saddle Creek, a tributary of the Peace River.

Teneroc isn't the only proposed Superfund site that drains into the Peace River. According to the EPA, the list includes:

Agrico Chemical Co.'s Saddle Creek site in Lakeland.

Farmland Industries' plant in Bartow.

IMC's Clear Springs Mine near Bartow.

Mobil mine at Fort Meade.

U.S. Agri-Chemical plants in Bartow and Fort Meade.

Meanwhile, the U.S. Army Corps of Engineers is poised to issue permits for another 50,000 acres of phosphate mining. They include IMC Phosphates' 24,000-acre Ona mine and Cargill Fertilizer's 15,000-acre Hardee County mine.

Glenn Compton, president of the Manasota-88 environmental organization, called for a moratorium on mining until the costs of the cleanups can be determined.

"Its really discouraging to find (the EPA is) not even going to clean up one site because they recognize the problem is so large, they're just going to ignore it," said Compton.

"It's time to put a moratorium on all phosphate mining and permits and do an evaluation of the current problem in Florida," he added.

"In my opinion, we're going to be facing one environmental problem after another and it's going to be the taxpayers that are footing the bill."

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